Appl. No. 10/800,371   PATENT
Amdt. dated August 7, 2007
Response to Notice of Allowance May 29, 2007

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1.   (Previously Presented) An apparatus for processing a supervisory signal for optical network applications, the apparatus comprising:

a subcarrier transmission system configured to receive a first supervisory signal and output a second supervisory signal;

an electrical-to-optical conversion system configured to receive the second supervisory signal and a first data signal and output a first optical signal;

an optical-to-electrical conversion system configured to receive the first optical signal and output a first electrical signal and a second data signal;

a subcarrier reception system configured to receive the first electrical signal and output a third supervisory signal;

wherein the second supervisory signal is associated with a first subcarrier frequency;

wherein the first data signal is associated with a first data bandwidth, the first data bandwidth including a first data frequency, at the first data frequency a power density of the first data signal substantially equal to zero;

wherein a ratio of the first subcarrier frequency to the first data frequency ranges from 0.8 to 1;

wherein the first optical signal is associated with a perturbation to the first data signal, the perturbation being smaller than or equal to 1 dB;

wherein the first optical signal is associated with a signal-to-noise ratio for the second supervisory signal, the signal-to-noise ratio for the second supervisory signal being larger than or equal to 20 dB;

wherein the first supervisory signal is associated with a first subcarrier data rate larger than 1 Mbps.

2.   (Original) The apparatus of claim 1 wherein the first subcarrier signal is associated with the first subcarrier data rate larger than 5 Mbps.

3.   (Canceled)

4.   (Original) The apparatus of claim 1 wherein the first data frequency is a maximum frequency associated with the first data bandwidth.

5.   (Original) The apparatus of claim 4 wherein the first data frequency is substantially equal to 2.5 GHz and the first subcarrier frequency is substantially equal to 2.4 GHz.

6.   (Original) The apparatus of claim 5 wherein the first data signal is associated with a non-return to zero format and a first data rate substantially equal to or smaller than 2.5 gigabits per second.

7.-18. (Canceled)

19.   (Previously Presented) A method for processing a supervisory signal for optical network applications, the method comprising:

receiving a first supervisory signal;

processing information associated with the first supervisory signal;

outputting a second supervisory signal based on at least information associated with the first supervisory signal;

receiving the second supervisory signal and a first data signal;

processing information associated with the second supervisory signal and the first data signal;

outputting a first optical signal based on at least information associated with the second supervisory signal and the first data signal;

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receiving the first optical signal;

processing information associated with the first optical signal;

outputting a first electrical signal and a second data signal based on at least information associated with the first optical signal;

receiving the first electrical signal;

processing information associated with the first electrical signal;

outputting a third supervisory signal;

wherein:

the second supervisory signal is associated with a first subcarrier frequency;

the first data signal is associated with a first data bandwidth, the first data bandwidth including a first data frequency, at the first data frequency a power density of the first data signal substantially equal to zero;

a ratio of the first subcarrier frequency to the first data frequency ranges from 0.8 to 1;

the first data frequency is a maximum frequency associated with the first data bandwidth;

the first data frequency is substantially equal to 2.5 GHz and the first subcarrier frequency is substantially equal to 2.4 GHz;

the first data signal is associated with a non-return to zero format and a first data rate substantially equal to or smaller than 2.5 gigabits per second;

wherein the first optical signal is associated with a perturbation related to the first data signal, the perturbation being smaller than or equal to 1 dB, the first optical signal is associated with a signal-to-noise ratio for the second supervisory signal, the signal-to-noise ratio for the second supervisory signal being larger than or equal to 20 dB.

20.   (Original) The method of claim 19 wherein the first supervisory signal is associated with a first supervisory data rate larger than 1 Mbps.

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     21.   (Currently Amended) The ~~apparatus~~<u>method</u> of claim 20 wherein the first supervisory data rate is about 5 Mbps.

     22.-30. (Canceled)